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(56) Documents Cited
GB 2222939 A GB 2178950 A GB 1297920 A
GB 1173916 A GB 0686417 A US 4690362 A

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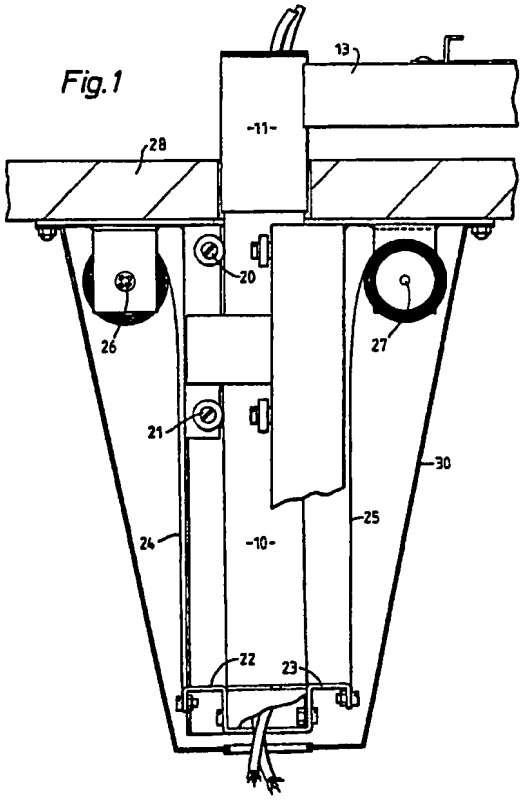
(54) Support unit for a VDU or the like

(57) The support unit comprises a platform 13 to receive the VDU and a shaft 10 about which the platform can rotate. The shaft is movable vertically to adjust the height of the platform. Tensator springs 24, 25 are adjustable so that the weight of the platform and VDU can be compensated. The shaft is supported in spaced sets of bearing rollers 20, 21 which bear with light pressure on the shaft to retain it in the adjusted position.

Fig.1



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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

Fig. 1

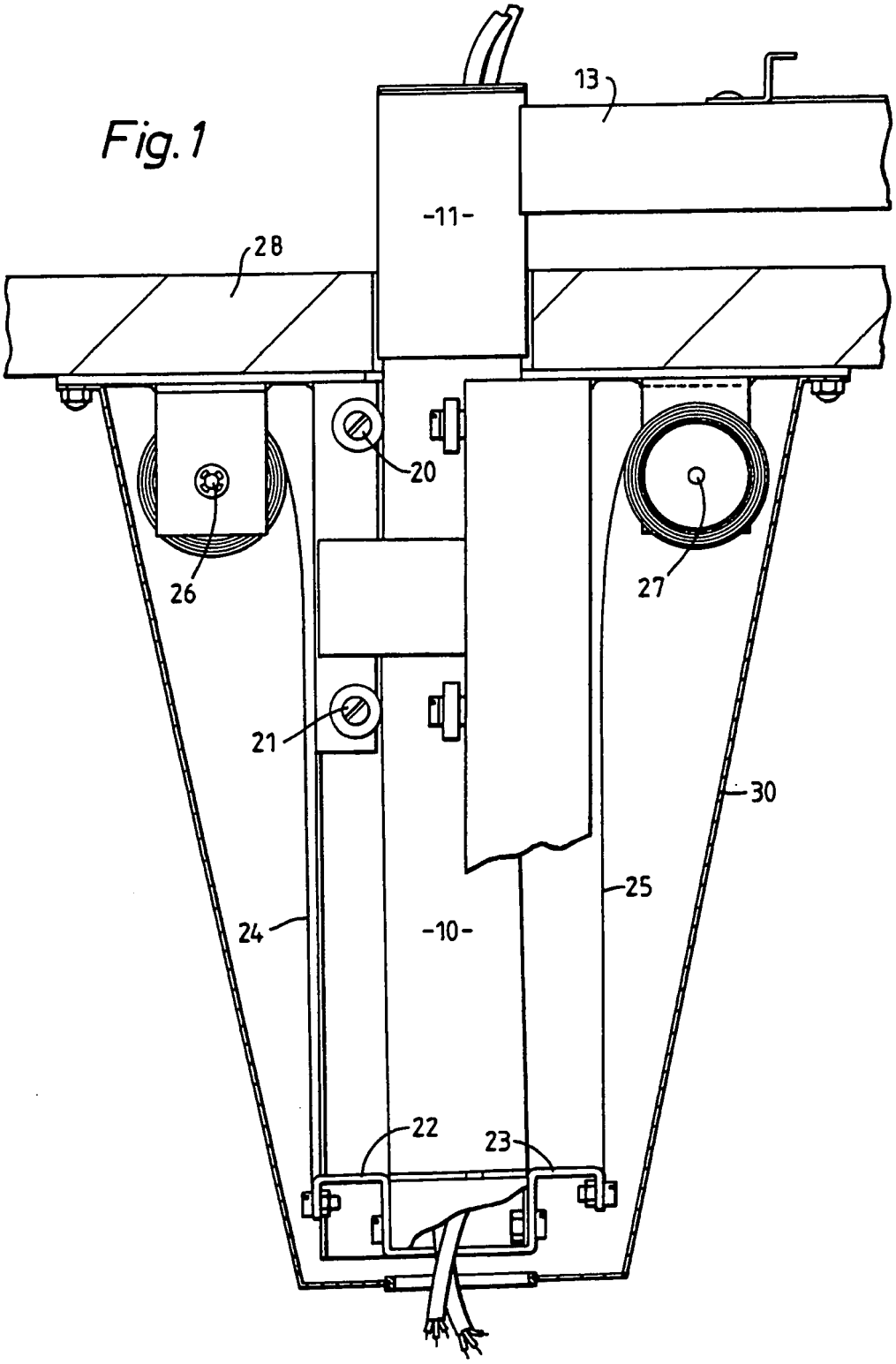


Fig. 2

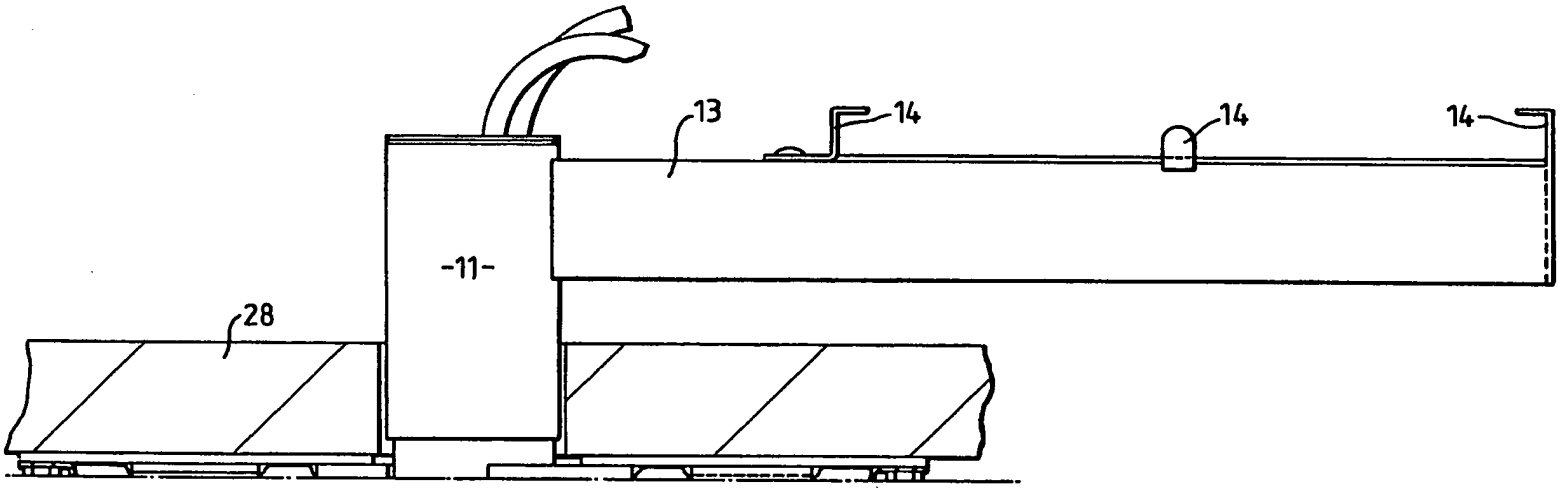
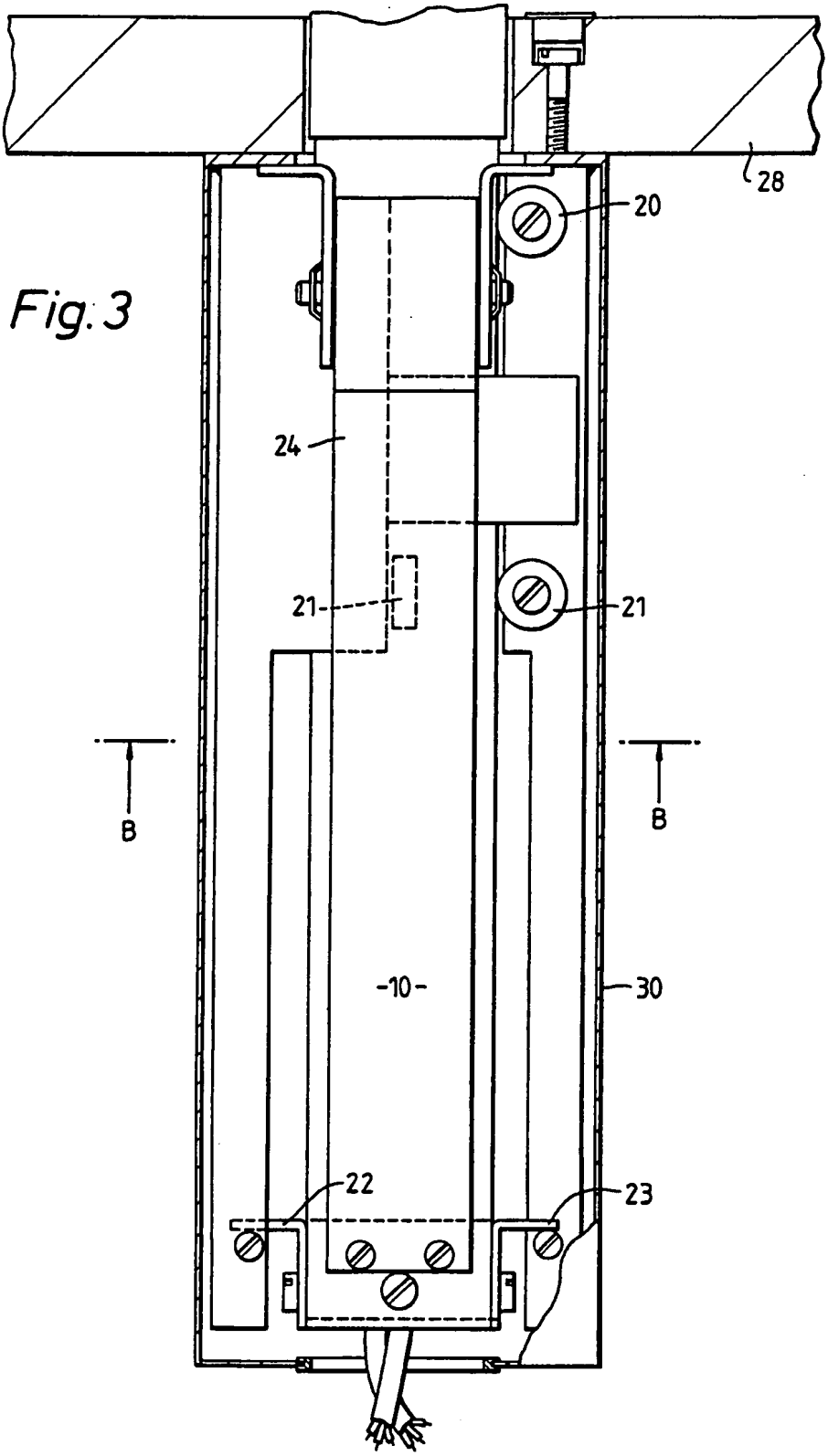


Fig. 3



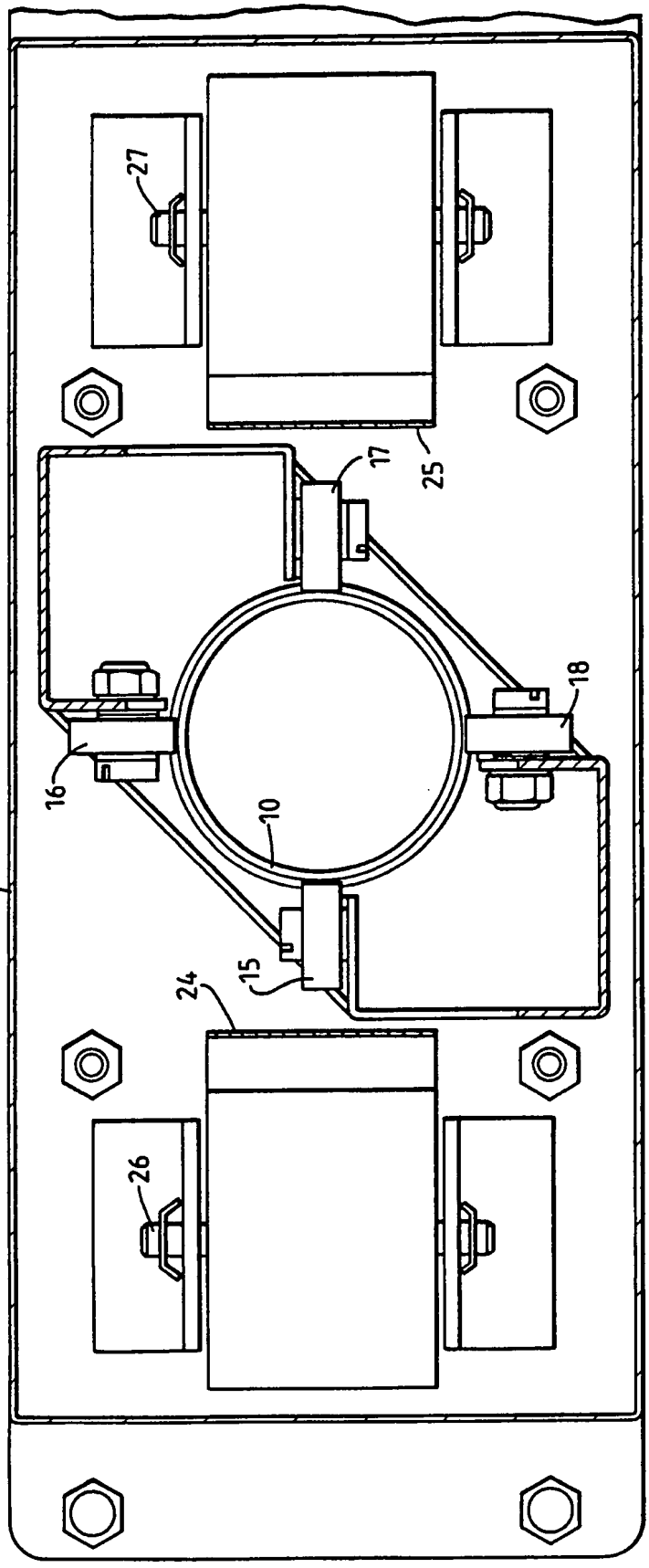


Fig.4

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VDU SUPPORT UNIT

This invention relates to a support unit for a VDU unit or the like. Such support units are designed to enable the position of the VDU to be adjusted.

It is an object of the present invention to provide an improved unit of this kind.

A support unit for a VDU or the like comprises a platform to receive the VDU, a shaft about which the platform can rotate, the shaft being movable vertically to adjust the height of the platform and means for automatically retaining the shaft in the required position.

With this arrangement the user can adjust the height and the platform will stay in the required position without further action being required.

Preferably the means for automatically retaining the platform comprise one or more tensator springs adapted to balance the weight of the unit, platform, shaft and any other item which might add to the weight.

Preferably friction means are provided to assist in retaining the shaft in the required position, and in this case they may comprise bearing rollers adapted to engage the shaft.

The bearing rollers may comprise sets of vertically spaced apart rollers adapted to engage the shaft at correspondingly spaced intervals. The sets of rollers are also preferably equally angularly spaced around the shaft, ie, at 90° to one another.

In one convenient arrangement two tensator springs are provided the lower ends of which are secured adjacent

the base of the shaft. The shaft is preferably fixed and the platform is rotatably mounted on the upper end thereof by means of a bush etc. rotatable with respect of the shaft.

The platform is conveniently mounted above a work surface and the means for automatically retaining the shaft are mounted below the work surface.

The invention may be performed in various ways and one specific embodiment will now be described by way of example with reference to the accompanying Figures in which:-

Figure 1 - is a view partly in cross section through a unit according to the present invention

Figure 2 - is a view of the platform which is partially shown in Figure 1

Figure 3 - is a view taken at 90° to the view shown in Figure 1 and

Figure 4 - is a section along the line B-B on Figure 3

In the Figures a VDU support unit is shown which comprises a main support shaft 10 which has at its upper end a bush 11 which is rotatably mountable with respect of the upper end of the shaft. The bush 11 has extending from it a VDU support platform 13 which is shown also in Figure 2 and on which is mountable a VDU unit which is retained thereon by brackets 14. The VDU unit is a standard unit and is in itself adjustable with respect of the angle required by the user.

The shaft 10 is not rotatable but is movable axially upwards and downwards to enable the VDU unit to be

automatically supported in the required position, that is without the use of other securing means once the required position has been found. To this end it has four sets of bearing rollers 15, 16, 17 and 18 shown in Figure 4 but arranged at 90° to each other around the shaft and each comprising two spaced apart rollers 20 and 21 which bear with light pressure on the circumference of the shaft.

The shaft has at its lower end two laterally extending support brackets 22 and 23 on which are mounted the lower ends of tensator springs 24 and 25. The upper ends of the tensator springs are mounted in supports 26 and 27. The tensator springs are adjustable so that the weight of the VDU on the platform 13 and the weight of the platform, bush and shaft are compensated by them. The roller bearings on the shaft provide a degree of friction which enables the unit to be placed in the desired vertical position and will remain in that position.

The tensator springs and other mechanisms for automatically supporting the platform are all located below a work surface 28 and are housed in a casing 30 of generally frusto-conical form below the work surface. Thus all the mechanism is hidden from view and also leaves the work surface clear.

CLAIMS

1. A support unit for a VDU or the like comprising a platform to receive the VDU, a shaft about which the platform can rotate, the shaft being moveable vertically to adjust the height of the platfrom and means for automatically retaining the shaft in the required position.

2. A support unit as claimed in Claim 1, in which the means for automatically retaining the platform comprise one or more tensator springs adapted to balance the weight of the unit, platform, shaft and any other item which might add to the weight.

3. A support unit as claimed in Claim 1 or Claim 2, in which friction means are provided to assist in retaining the shaft in the required position.

4. A support unit as claimed in Claim 3, in which the friction means comprise bearing rollers adapted to engage the shaft.

5. A support unit as claimed in Claim 4, in which the bearing rollers comprise sets of vertically spaced apart rollers adapted to engage the shaft at correspondingly spaced intervals.

6. A support unit as claimed in Claim 5, in which the sets of rolles are equally angularly spaced around the shaft.

7. A support unit as claimed in Claim 6, in which two tensator springs are provided the lower ends of which are secured adjacent to the base of the shaft.

8. A support unit as claimed in any one of the preceding Claims , in which the shaft is fixed and the platform is rotatably mounted on the upper end thereof by means of a bush etc. rotatable with respect to the shaft.

9. A VDU support unit as claimed in any one of the preceding Claims, in which the platform is mounted above a work surface and the means for automatically retaining the shaft are mounted below the work surface.

10. A support unit for a VDU or the like substantially as described herein with reference to and as shown in the accompanying drawings.

Patents Act 1977 Examiner's report to the Comptroller under Section 17 (The Search report)	Application number GB 9308613.0
Relevant Technical Fields (i) UK Cl (Ed.M) A4L (LAAJ; LCC) (ii) Int Cl (Ed.5) A47B 9/00, 9/02, 9/04, 11/00, 21/02 F16M 11/04, 11/06, 11/08	Search Examiner D BUCKLEY Date of completion of Search 19 JULY 1994
Databases (see below) (i) UK Patent Office collections of GB, EP, WO and US patent specifications. (ii) ONLINE DATABASES: WPI	Documents considered relevant following a search in respect of Claims :- 1 TO 10

Categories of documents

X:	Document indicating lack of novelty or of inventive step.	P:	Document published on or after the declared priority date but before the filing date of the present application.
Y:	Document indicating lack of inventive step if combined with one or more other documents of the same category.	E:	Patent document published on or after, but with priority date earlier than, the filing date of the present application.
A:	Document indicating technological background and/or state of the art.	&:	Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
X	GB 2222939 A	(MICROCOMPUTER ACCESSORIES) see eg Figure 1 lines 17 to 21 of page 12 and lines 1 to 19	1
X	GB 2178950 A	(BRITISH OLIVETTI) see lines 128 to 130 of page 1 and lines 47 to 65 of page 3	1 & 9
X	GB 1297920	(HAGO PRODUCTS) see Figures and lines 23 to 28 of page 1	1 & 3
X	GB 1173916	(BONETTI) see eg Claim 1	1 & 2
X	GB 686417	(TANGYES) whole document	1
X	US 4690362	(TANGBERG DATA) see lines 27 to 38 and 57 to 62 of column 2	1 & 2

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).